

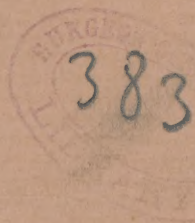
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PHYSICAL TRAINING  
OF THE INSANE.

✓ BY  
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WITH REMARKS  
BY  
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FROM  
American Journal of Insanity,  
October, 1889.  
UTICA, N. Y.







## PHYSICAL TRAINING OF THE INSANE.\*

BY WALTER CHANNING, M. D.,  
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During the last few years we have all become conscious of a new or awakened interest in the subject of physical development, in which is included the general care of the body as well as the more special training of the muscular system.

The amount of attention paid to out-door sports in schools and colleges has grown steadily during the past twenty years; and during the last ten, gymnasiums have multiplied in these institutions with great rapidity.

It was natural that the young and active should enter into athletics with enthusiasm, as this is a necessary element of their education and development, and at first it seemed to be due to a reaction which had taken place in our system of education, whereby over-cultivation of the mind was to be reduced, and counterbalanced by increased recreation and sport. Time has proved however that the explanation was deeper seated, and instead of being the result of the peculiar conditions of college life, was symptomatic of a generally felt need of improved physical resistance, made necessary presumably by the gradually increased strain.

Thirty years ago, perhaps some will say, there were indications that more attention was to be paid to physical training, as about that time Dio Lewis established a gymnasium in Boston combined with the so-called "Swedish Movement Cure," and gave more or less systematic courses to classes of all kinds. He also later established a school where gymnastics were made prominent. But Dio Lewis was neither scientific nor thorough, though at first sight he appeared to be both, and his efforts were little more than the individual efforts of an erratic genius—shall I venture to say?—striving to popularize a principle, which he vaguely comprehended. The world was not yet ready to appreciate this principle, and his work bore comparatively little fruit, though many persons tried his system of gymnastics and even some of the insane hospitals formed classes among the patients.

I speak with some personal knowledge of Dio Lewis' system, for I belonged to one of his mixed classes for two years. While I had

\* Read at the annual meeting of the Association of Medical Superintendents of American Institutions for the Insane, held at Newport, R. I., June 18-20, 1889.



a very good time, I accomplished comparatively little in the direction of physical training, and received no instruction at all in the meaning and value of gymnastic exercises. Making due allowance for youth and stupidity, the same amount of time spent to-day on gymnastics, would have far reaching and tangible results, both in body building, and appreciation of the *raison d'être*.

We should however seek to do justice to the memory of Dio Lewis, and bear in mind the fact that he was a pioneer in this country in a field which had been almost unworked up to his time. To-day there are many workers in various parts of the country, each one of course adding something to the common fund of knowledge, which is being sifted and analyzed, and utilized in some of our best gymnasiums.

In Boston the subject of physical training has slowly assumed great importance both in the education of the young and the preservation of the health of adults of all ages. The nearness of a great university town with its numerous athletic interests may have had something to do with this, but undoubtedly the chief reason is the need felt by the community at large as said above for improved bodily health and strength, and the instinctive reaching out for the means of accomplishing this purpose which is now found to be in development of the body, and not as formerly, in amusement for the mind alone.

The difficulty with the use of heavy gymnastics has been, and still is to a certain extent, that they chiefly develop certain groups of muscles to produce increased muscular strength. Such development often only increases the power of single muscles, which are already sufficiently stimulated and require less, rather than more use—while weak and defective groups are entirely neglected.

The Dio Lewis system went rather to the other extreme, and neglected the use of certain special forms of apparatus, which were called for in special cases.

The present system, founded on a scientific basis to overcome individual defects and produce a symmetrical development of both sides of the body, takes in a great variety of apparatus and free hand movements, and might be called the "graded," or "progressive system."

The success of this system depends on the carrying out of certain principles. In the first place the teacher should know how the movements are anatomically produced and what their physiological effect is. I do not mean to say that the teacher can be expected to have a thorough knowledge of anatomy and physiology, but



at least enough to have a general idea of what happens when certain muscles are brought into play.

In the second place, the teacher should have a knowledge of each pupil even in class work, and be able to give special work for individual defects, outside of the class. In ordinary gymnasiums blanks are kept for marking the forms of apparatus needed for correcting such defects, and in insane hospitals with well-equipped gymnasiums and teachers, the same system can be followed.

In the third place, the plan of slow progression in applying new movements should be carefully followed. It is found that taking a class of persons of an average age, and in fair physical condition, certain movements can be applied with safety at the start. These movements can be done with varying degrees of vigor according to the health of the subject, the emphasis or "expression" differing in different cases. Taking the same class after a few months of work, perhaps for only twice a week, it will be found that they can go through exercises impossible at the beginning. The rapidity with which a class may be allowed to progress is, of course, a matter of judgment, but the ideal way is to learn a few simple movements perfectly, before undertaking more difficult ones. By proceeding on this plan a self-confidence, freedom and lightness of motion is acquired, which is a great aid in learning a new series. The length of time required for a graded course of two lessons a week at the gymnasium of Miss Allen, which is perhaps the best equipped for class work of any gymnasium in America, is three years.

In the fourth place, class gymnastics cannot be successfully taught except with suitable surroundings. The gymnasium should be of good size, cheerful and well fitted with apparatus. The teacher should have enthusiasm and skill, and most of the exercises should be done to music, though some good authorities are opposed to the use of music as being too stimulating and apt to produce an artificial effect. I have carefully tried both systems, and as far as my personal and general experience goes am strongly in favor of the music. It arouses and fixes the attention, and assists in harmonizing the work of different members of a class. The teacher is also able to give more exact and undivided attention than when she is obliged to count to keep the rhythm. Precision of movement is lacking in a surprisingly large number of persons both sane and insane, and persistence in going through gymnastic movements to music in correct time, helps very much to develop this precision, by a slow and gradual process, not fatiguing mentally in its acquisition, but of undoubted benefit when acquired.

My attention was first called to the use of gymnastics for the insane in searching around for some additional means of occupation rather than as medical treatment. I had little idea of the benefit to be derived in this direction from their use. I regret now that I have gone so many years without them, as they have been of great service from the beginning.

I had long known of the use of gymnastics in insane hospitals, having seen in 1878 a class of ladies at work in the Pennsylvania Hospital for the Insane, but I knew of no institution where the present system as exemplified in the Allen gymnasium was employed, and I had the idea, which I think has been pretty generally entertained until recently, that while light gymnastics or calisthenics were a pleasant amusement for girls, they were of little utility for purposes of physical building up.

That I am right in this opinion I think will be seen from the answer I have received to the inquiries which I sent out to all the members of this association. I sent out about one hundred and thirty inquiries, and received ninety-seven answers. Out of this number twenty institutions used some form of apparatus, but two only in summer, and three had only one form. In five only had anything been done before seven years ago, and out of the five, systematic work was not done in more than two. In 1884, four began some form of work; one in 1885; one in 1886; one in 1887; four in 1888; two in 1889, and seven are preparing to introduce gymnastics, showing the marked interest now manifesting itself. The number of teachers is small, there not being over three professional teachers employed, including my own, as far as my information goes. Out of seventeen answers as to results, in one they were "not marked;" in one "too early to give results;" in one "healthy exercise;" in one "lack of interest;" in one "appreciated." In the remaining twelve the results were all "good," "beneficial" or "excellent." In five institutions gymnastics had been abolished for different reasons.

The Pennsylvania Hospital should be mentioned as one of the pioneers in gymnastics. "As early as 1863," Dr. Chapin writes, "Dr. Kirkbride had introduced physical training with light gymnastic exercises. \* \* \* \* I have heard that Dr. K. was induced to organize a class on the suggestion of Dr. Dio Lewis, or on seeing his system. Dr. Lewis furnished a teacher, and in two years an instructor was regularly employed. The exercises have, I think, continued to the present time. At present we have an instructor who comes twice weekly. The form or order con-



sists of synchronous movements with light wood dumb-bells, marching to music, exercise with the light staff, ending for the evening with dancing."

Dr. Merrick Bemis, ex-superintendent of the Worcester Lunatic Hospital, writes that "in 1867" he "established a class in light gymnastics, comprising a large number of the female patients of the Worcester Lunatic Hospital. They were provided with regular gymnastic dresses of flannel, and had a paid teacher from one of the Worcester public schools." The men were also provided with cheap structures on the grounds. Dr. Bemis continued the work as long as he remained in the hospital.

Twenty years ago, at the McLean Asylum and the Taunton Lunatic Hospital some gymnastic exercises were introduced. At the latter institution they have been kept up with some degree of regularity, and consist in dumb-bell exercises and marching to music.

In the winter of 1887 I began the work with my own patients and employés, and I would say in passing that it has been of great benefit to the latter. I began with the simple forms of apparatus, such as wooden and iron dumb-bells, and bean-bags, having only a parlor to exercise in. I employed a competent and enthusiastic teacher from Miss Allen's gymnasium, and most of the exercises were performed to the accompaniment of good music by a player experienced in the work. The latter has been of great assistance from the beginning, and whatever may be thought of the value of music for sane persons, it is almost indispensable, as above intimated, in class work for the insane.

The whole class was composed of twenty persons, which is about two-thirds of the maximum number that a class should contain in a large and well equipped gymnasium. Patients, nurses, and one or two other employés, were mixed indiscriminately together, and such compulsory training with healthy minds was of great benefit to the patients, considerably raising the standard of work which would have been attained by the insane alone, and also stimulating the teacher to further efforts on her own part.

My patients living together as a small family, I began with both sexes together, and this system I still continue in general class work, but in addition the sexes exercise separately on other days. There was some difficulty at the beginning in getting certain of the female patients and employés into costume, the latter especially fearing the unbecoming effect, but gradually every one put on the costume, and now wear it so frequently that they all feel perfectly

at home in it. The material for the "Bloomer" dress does not cost more than two dollars and a half, and is made so simply that two days' time is quite time enough to produce one. In mixed classes the men can wear a blouse over an undershirt; in work by themselves flannel clothing of any kind will suffice.

On the completion of my new gymnasium in February of the present year, I was able to enlarge on and "progress" in, the work begun in the winter of 1887. I now added exercises in great variety with the chest weights; the upright chest bars; the suspended parallel bars; the high bar; the vaulting bars; the medicine ball, wands, and breathing exercises on the mats. It will still take two winters to exhaust the exercises in a properly graded three years' course, as I count our work for the past two winters as that of only the first year.

The question will at once arise in the minds of many, "How is a graded three years' course to be given to a class, the personnel of which is subject to frequent change?" There are of course difficulties in progressing to a complete termination. But the principle of enlarging, improving, going forward to something better, can be steadily adhered to, and is the vital element of success in modern gymnastic class work. The old-fashioned humdrum routine of simple light gymnastics was soon exhausted, and became actually fatiguing to the subject mentally. Now with a gymnasium stocked with apparatus, including the old forms for heavy work, and modifications of these with many forms, altogether new and recently invented, we have, in the combination of the old and new, if the resources are brought out as they are or should be by teachers skilled in the present system of rational gymnastics, variety enough to extend over years.

My classes have met together three times in two weeks, and the women twice by themselves in addition, and the men three times. On the latter occasions other special forms of apparatus have been used in addition to those already mentioned, and without music. Disturbed patients have gone to the gymnasium singly, or in pairs, and have done such work as was possible. Nearly every one has tried something.

A female nurse, who has been doing some additional work, has taken charge of the ladies in the individual work, and a male nurse also with some training, has looked out for the men. The idea has been to have no one working without some one competent to give instruction, and check over-exertion. The men have been inclined to use the high bars, chest weights, Indian clubs, rowing



and intercostal machines, and sometimes with too much vigor when unrestrained, but have got much benefit and pleasure by active work when alone, which they could not have had with ladies present. They have also done some sparring, without regular instruction, and this form of exercise in some cases may be of benefit.

The time occupied in the class work has been from three-fourths of an hour to an hour, the latter time being sufficient. My instruction to the teacher has been to make the work moderately simple, and varied with frequent marches, but continuous as possible, my desire being to suddenly, as it were, divert or arrest the attention and fix the thought in a new direction, until the general stimulation of the organism had taken place, when the reaction could be relied on to produce a certain tonic or bracing effect. The difficulty, of course, has been to get some patients to begin the exercises, or to carry them forward with enough steadiness to reach the point where the circulation would be somewhat accelerated. Just here the bright, cheerful music has been of great service in arousing the scattered, wandering and enfeebled brain cells into activity.

The general class work has been in the evening, when the patients have been at their best mentally, but both mornings and afternoons have been utilized for individual or divided class work.

In addition to the general work of the gymnasium, there remains the wide field of special and individualized work, for use in various conditions, such as physical defects, or localized disease. Such work is sometimes called "medical gymnastics," and is now being applied in Boston, more especially perhaps, by Baron Nils Posse.

The system as practiced by Posse, is that taught at the Central Royal Gymnastic Institute, founded at Stockholm in 1813, by the celebrated Ling, the originator of the so-called "Swedish Movement Cure."

To thoroughly understand and apply it, at least a fair medical education is necessary, to say nothing of special training, which undoubtedly may best be acquired at the above mentioned institute, or one conducted on a similar plan.

While the ordinary medical man may be able to comprehend it in a general way and even prescribe it, its application must be left to specialists in spite of Schreiber, who says: "Every physician having the inclination and ability, no matter where he may practice, may acquire self-taught and successfully employ the

methods of mechano-therapy (or medical gymnastics) in the treatment of disease.”\*

There is, however, as Posse truly says: “In medical gymnastics; a vast field for an exploring scientist \* \* \* and physicians should themselves take this matter in hand and not leave it to be practiced only by uneducated charlatans, and by a few specialists who have had a medical education for this particular purpose.”† We certainly should take it in hand, and make use of medical gymnastics, as in many cases they may be of greater benefit than any other form of treatment.

As a first step in special work, I have been for some time past gaining through the recently translated book of Angerstein and Eckler, with a class of four nurses. They have learned both how to apply the exercises and their various uses, and when sufficiently far advanced, the exercises can be regularly prescribed in specific cases.

For patients who can only do work at home, or in their rooms, these exercises will be useful, especially as they are simple and the patients can soon learn them. And there is the further advantage that there is the book to fall back on, and both nurse and physician can understand the system that is being applied. In times past we have labored under the serious disadvantage of not quite knowing how far and in what ways gymnastics were useful, and not feeling able in consequence to undertake them.

Even a series of gymnastics for home use can be done to much greater advantage, if first taught by a teacher, or if the learner has had previous instruction in a gymnasium. There are certain things we can hardly learn from books, and accuracy of movement and correct “expression,” are among these things.

The rule has been that all should have a general, or sponge bath, immediately after exercising, both to stimulate the action of the skin and thereby add to the value of the exercises, and to guard against taking cold. The bathing afterward should in some form be carefully attended to, and often combined with it alcohol rubs and massage can be given. At the Allen Gymnasium there are scores of small basins with hot and cold water, in little rooms no larger than closets, with concreted floors, and connected with them are small dressing-rooms containing numerous lockers. By this arrangement several persons can at short intervals use each

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\* Treatment by Massage and Exercise. By G. Schreiber.

† The Therapeutic Application of Medical Gymnastics. By Baron Nils Posse *Boston Med. and Surg. Journal*, May 9, 1889.



bath and dressing-room. The rule is pretty general that everyone must bathe before leaving the building.

*Results.*—I had little idea, until going through a course of gymnastics at the Allen Gymnasium with a class of thirty men, how far-reaching the effects of such work frequently were. No matter how tired the class might be at the beginning, fatigue was soon forgotten and disappeared. It was the same with any feeling of mental dulness, depression, headaches, &c. Such feelings were pretty apt to disappear, and on leaving the gymnasium, the general condition was one of restfulness and tranquility.

As the course progressed it was noticed by those who had taken the work most carefully, that the general physical condition had improved. The appetite was better, the sleep better, the power of standing fatigue better, susceptibility to cold less, and in some cases chronic headaches were cured, and the mental condition improved.

It was surprising also to those who had never exercised before that many of the exercises which were difficult at first became easy toward the end, and further, much work could be done that was impossible at first.

With the insane, of course, the results have been more varied and uncertain, but on the whole they have been gratifying directly and collaterally. There can be no doubt that nutrition has been improved in a number of cases, but the especially perceptible result, which is more marked as time goes on, is the generally improved physical and moral tone, both among patients and employés. There is less susceptibility to trifles, more freedom of motion, more independence of action, more appreciation among all of the value of exercise and care of the body, and more coöperation in the general treatment.

The amount of amusement furnished is of course considerable. The lively music and brightly-lighted hall and magnetic teacher are all diverting, and the exercises are just enough varied to keep up the interest without fatiguing.

I feel that I am as yet not beyond the elementary stage of physical training of the insane by means of gymnastics, but the results are certainly favorable enough to encourage me to persevere. I can say from my personal experience, that there is much more in such work than I had ever imagined. This confidence is of course of great assistance in carrying out the details of what might be called "gymnastic treatment," for I cannot help having some enthusiasm for a plan of treatment which has been of such benefit to sane subjects, as well as to the nervous and insane.

A personal knowledge of gymnastics by the medical officers is almost essential to their successful introduction into institutions it seems to me, or at any rate such a knowledge very much enhances the chances of success, as they cannot otherwise as intelligently supervise or direct their application.

In the use of gymnastics for the insane, the subject is less able than in the community at large to give any evidence of whether the work is too hard for him, or not suited to him, and hence it is especially necessary to understand both the changes produced in him by mental disease, and the general effect of gymnastic exercises on persons in health.

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#### REMARKS ON PHYSICAL TRAINING OF THE INSANE.\*

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BY MISS A. W. ADAMS,  
Instructor in Gymnastics at Dr. Channing's Private Hospital.

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Dr. Channing has mentioned the exercises which we shall illustrate here this afternoon, which I will explain more fully. Our system induces no thought on the part of the pupil, nor real mental effort. The evil we are trying to counteract is the abnormal pressure, consequently pupils work entirely by imitation, which is largely intuitive, and little call is made on the nerve force. Herein we differ materially from the present promulgators of the Ling system, though all systems of harmonious bodily development are based upon the thought of Ling.

This principle makes our system particularly adaptable to the insane and nervous, as the object is to send through the system the purest blood, with the least possible exhaustion of nerve force. The work is divided into yearly courses, and is carried on in a slow but progressive manner, commencing with simple elementary work—one movement dependent upon and leading up to the next, until finally the whole body is exercised without apparent effort on the part of the pupil.

I have endeavored to carry out these same methods with the insane—with the exception that I am obliged to go much more slowly, often to omit alternate movements and complicated ones entirely.

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\* Being part of the discussion which followed the reading of Dr. Channing's paper.



Instead of giving three or four rests during the hour as is customary with beginners, I find it is better to keep the class working steadily for thirty or forty minutes and then dismiss them. By so doing I held their attention better and kept the interest up. With very nervous, delicate patients who are not strong enough to take the exercises standing, very slow, stretching movements on the back are given, which have a very soothing, quieting effect.

I open with free movements given for the purpose of starting the circulation, limbering the joints, and exercising a large number of the muscles greatly from head to foot. The general order for the series being movements for the head, shoulders, whole arm, forearm, wrist, fingers, trunk, whole leg, lower leg and ankle.

We next pass to the side pull, the elementary work at the chest weights, using the right and left arms alternately. This series develops the pectoralis major, latissimus dorsi, trapezius, biceps, and all the grip muscles of the arms. The double chest weights is more advanced work, in which both hands are used at the same time and exercise principally the biceps, triceps, latissimus dorsi, deltoid, pectorals and stretches back from neck to heel and gives a churning movement to the abdomen.

The bells used are very light, in order that the body or chest may be exercised as well as the arms. The series with both wooden and iron dumb bells, also wands, are combined with the object of exercising not only the muscles of the arm, chest and back, but of the leg, by giving stooping and bending movements.

In the iron bells the movements are very slow and gliding, giving more of a sustained action to the muscle, while in the wooden the active movement and rest is much more marked. During the period of exercise, the movements increase in force, so that at the end of the hour the pupil leaves the floor, in a brisk glow, ready for a bath. The closing exercises are either a quick march or breathing movements, the latter having a more quieting effect upon the insane.







